

REMARKS

Claims 1-20 are pending in this application. Claims 5, 7, 9 and 13-18 stand withdrawn. Claims 1, 2 and 16 are independent claims. By this Amendment, claims 1 and 11 are amended. No new matter is added.

Restriction

Upon allowance of either generic claim 1 or 2, rejoinder and allowance of the withdrawn claims is requested.

Claim Rejections under 35 U.S.C. §102

Claims 1-4, 10, 19 and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by WO 95/21690 to Gardin et al. ("Gardin"). The rejection is respectfully traversed.

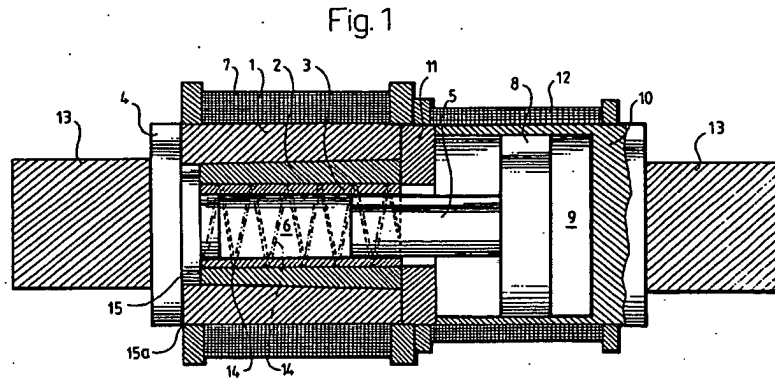
Independent claim 1 is amended to recite a **final** prestressing device, provided around an outer envelope surface of the force-absorbing body for providing the **final** radial prestress in the force-absorbing body.¹

In rejecting independent claim 1, it is alleged that the first outer cylinder element 1 corresponds to the claimed "prestressing device" and that the first outer cylinder element 1 is provided around an outer surface of the safety liner 3 (alleged to correspond to the claimed "force-absorbing body").

However, as shown for example, at Fig. 1 of Gardin (below), the first outer cylinder element 1 is not the "final" prestressing device that provides the "final" prestress in the safety liner 3. Rather, as shown in Fig. 1 of Gardin, the steel wire

¹ Applicants note that the present amendment to independent claim 1 was suggested by the Examiner during the interview conducted on January 6, 2011.

winding provides the "final" prestress to the high-pressure cylinder 1, 2, 3 (also see for example, page 7, lines 12-16 and page 8, lines 30-32).



Because Gardin fails to disclose or suggest each of the features of independent claim 1, as amended, Gardin does not render the claims unpatentable. As such, withdrawal of the rejection is requested.

Claim Rejections under 35 U.S.C. §103

Claims 11 and 12 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Gardin. The rejection is traversed.

Claims 11 and 12 are allowable for their dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein. As such, withdrawal of the rejection is requested.

Claims 1-4, 6, 8, 10-12, 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication 2002/0076347 to Maerz ("Maerz") in view of U.S. Patent Publication 2004/0004314 to Yoneda ("Yoneda") and further in view of Gardin. The rejection is traversed.

In rejecting the claims, it is admitted in the Office Action that Maerz fails to disclose or suggest 1) a prestressing device, provided around an outer envelope surface of the force-absorbing body, 2) the force-absorbing body thereby being radially prestressed; and 3) at least one tunnel-like passage running essentially over the length of said outer envelope surface of the force-absorbing body, the tunnel-like passage being defined by a groove in said outer envelope surface of the force-absorbing body and a portion of said prestressing device covering said groove, for conducting pressure medium to a point of detection if such medium has leaked out from the pressure chamber to the outer envelope surface of the force-absorbing body.

In an effort to overcome the admitted deficiencies of Maerz, it is alleged that it would have been obvious to one of skill in the art at the time of the present invention to modify the press of Maerz according to the teachings of Yoneda "to achieve the benefits discusses above" (i.e., the presence of passages to enable detection of fluid leakage, thus making it possible to detect any cracks in the force absorbing body and reduce the risk of a serious accident due to a cracked force absorbing body).²

However, the passages 3b of Yoneda do not run essentially over the length of the outer envelope surface of the force absorbing body that is in direct contact with the pressure medium. Rather, in Yoneda, the passages 3b are in the wire wrapping 3 (see Fig. 7B). Moreover, the passages 3b do not run over any part of a force absorbing body that is in direct contact with the pressure medium (i.e., the insulating layer inner cylinder 21). As such, Yoneda does not disclose or suggest the features as alleged in the Office Action. Therefore, the combination of references cannot render the claims obvious.

Further, the passages of Yoneda are not designed to detect leakage of pressure medium from the pressure chamber to the outer envelope surface of the force

² See Response to Arguments at page 9, line 22-page 10, line 2 of the Office Action.

absorbing member. Rather, as clearly described in Yoneda, the high temperature/high pressure vessel 1 has cooling water that cools the cylindrical body 2. An outer detecting groove 2e for detecting the leakage of cooling water through a sealing ring 8c from the interior of a cooling water chamber 8a in the cooling water supply header 8 is formed in an outer side, i.e., a lower surface, of the wire winding flange 2c. In this case, a cooling water detecting path is formed by both an upper surface of the cooling water supply header 8 and the outer detecting groove 2e. The vessel may also include an inner detecting groove 2f formed inside of the wire winding flange 2c and a leakage water detecting port 10a formed near a lower end of the vessel support structure 10, the port 10a causing the leakage water flowing through the inner detecting groove 2f to flow out to the outer position. Leakage water leaking out from the cooling water flow paths is guided to the inner detecting groove 2f through leakage water guide paths 3b to be described later. As shown in FIG. 7(b), the piano wire 3 is wound round the outer periphery of the outer cylinder 2b through spacer pieces 3a each having a length equal to the spacing between both wire winding flanges 2c, and the leakage water guide paths 3b are formed outwards at both transverse ends of each spacer piece 3a (see paragraphs [0081]-[0084]).

Thus, contrary to the allegation in the Office Action, Yoneda does not disclose or suggest at least one tunnel-like passage running essentially over the length of said outer envelope surface of the force-absorbing body, the tunnel-like passage being defined by a groove in said outer envelope surface of the force-absorbing body and a portion of said prestressing device covering said groove, for conducting pressure medium to a point of detection if such medium has leaked out through said force-absorbing body from the pressure chamber to the outer envelope surface of the force-

absorbing body, as in the rejected claims. As such, the combination of references cannot render the claims obvious.

Because Yoneda merely discloses detecting leaks in cooling water between the wire outer wrapping 3 and the cylindrical body 2 of a pressure vessel. Thus, in Yoneda, leakage of pressure medium cannot be detected but rather only leakage of cooling water can be detected because the leaking pressure medium would not enter into the detecting grooves between the outer cylinder and the wire wrapping. Further, even assuming a crack that would cause leakage of the pressure medium, in such case, it cannot be determined whether it is cooling water or pressure medium that is actually detected. Hence, in the event of fractures to both the inner and the outer cylinder it is very difficult to isolate the case of fractures to both cylinders, i.e. actual leakage of pressure medium from the pressure chamber to the outer envelope surface of the outer cylinder, from the case of fractures to the outer cylinder only since the cooling water will mix with the pressure medium. Because Yoneda fails to disclose or suggest the features as alleged, there is no rational basis to modify Maerz as proposed in the Office Action.

Although the Examiner indicates in the Response to Arguments section that the fluid or medium being detected is not germane to the merits of the rejection, the source of the fluid is germane to the rejection. For example, the present claims recite that the fluid being detected is from the pressure chamber and leaked out of the outer surface of the force absorbing body. In contrast, Yoneda teaches detecting cooling fluid leaked from a cooling header. Thus, even were the device of Maerz modified to include the teachings of Yoneda, it is the teaching of detecting the fluid leaking from the cooling passages taught by Yoneda and not fluid from the pressure chamber as

claimed.³ Therefore, even were the teachings of Maerz and Yoneda combined, the combination would not render the claims obvious. As such, withdrawal of the rejection is requested.

Finally, there is no rational basis to combine the references because Yoneda actually teaches away from the present invention at least because in Yoneda the entire cylindrical body of the force absorbing member is designed *not to break*. According to Yoneda, even if the inner cylinder 2a cracks, there is no fear of breakage of the entire cylinder body 2 (see paragraph [0064]). Thus, Yoneda implies that the device is unsuitable for detecting leakage of pressure fluid by allowing the entire force-absorbing body to crack and then detect leakage of the pressure fluid through the cracked body from the pressure chamber to the outer envelope surface.

Although Yoneda discloses detecting leakage via a safety valve disposed in a drain pipe that is connected to a drain port 7d of the cooling water circuit, such a teaching does not provide a rational basis to modify Maerz to include “at least one tunnel-like passage running essentially over the length of said outer envelope surface of the force-absorbing body, the tunnel-like passage being defined by a groove in said outer envelope surface of the force-absorbing body and a portion of said prestressing device covering said groove, for conducting pressure medium to a point of detection if such medium has leaked out from the pressure chamber to the outer envelope surface of the force-absorbing body,” as claimed because Yoneda does not disclose or suggest such an arrangement.

³ The totality of the prior art must be considered, *In re Hedges*, 783, F.2d 1038, 228 USPQ 686 (Fed. Cir. 1986); “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” *In re Wesslau*, 353 F.2d 383, 241, 147 USPQ 391, 393.

CONCLUSION

In view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-20 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. §1.17; particularly, extension of time fees.

Respectfully submitted,

HARNES, DICKEY, & PIERCE, P.L.C.

By:

John A. Castellano, Reg. No. 35,094

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/JWF:eaf